Translation

PATENT COOPERATION TREATY

PCT/JP2003/009367

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

Rec'd PCT/PTO 24 JAN 2005

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference H1810-01	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/JP2003/009367	International filing date (*day/month/year*) 24 July 2003 (24.07.2003)	Priority date (*day/month/year*) 24 July 2002 (24.07.2002)
International Patent Classification (IPC) or national classification and IPC G02B 5/30, G02F 1/1335		
Applicant NITTO DENKO CORPORATION		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 9 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☒ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 26 December 2003 (26.12.2003)	Date of completion of this report 16 September 2004 (16.09.2004)
Name and mailing address of the IPEA/JP Facsimile No.	Authorized officer Telephone No.

Form PCT/IPEA/409 (cover sheet) (July 1998)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/JP2003/009367

I. Basis of the report

1. With regard to the **elements** of the international application:*

☒ the international application as originally filed

☐ the description:

pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the claims:

pages _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the drawings:

pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the sequence listing part of the description:

pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* *Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).*

** *Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/JP2003/009367

II. Priority

1. ☐ This report has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:

   ☐ copy of the earlier application whose priority has been claimed.

   ☐ translation of the earlier application whose priority has been claimed.

2. ☐ This report has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid.

Thus for the purposes of this report, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

(See supplemental sheet)

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: II. 3.

JP 2002-215855 A, which serves as the basis for claiming priority of this application, does not disclose the feature of a polarizer containing a dichroic substance in a matrix, wherein the in-plane phase difference in the measurement wavelength which does not exhibit absorption falls within the range of 950 to 1350nm.

As a consequence, the opinions concerning novelty, inventive step and industrial applicability described in this written opinion were prepared taking the date of the international application as the reference date.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/JP 03/09367

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	2-3, 18	YES
	Claims	1, 4-17, 19	NO
Inventive step (IS)	Claims		YES
	Claims	1-19	NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims		NO

2. Citations and explanations

Document 1: JP 10-268294 A (Canon Inc.), 9 October 1998, entire text; all drawings, especially paragraph [0035] polarizer plate (5); paragraphs [0018] to [0020] (Family: none)

Document 2: JP 2002-333522 A (Nitto Denko Corporation), 22 November 2002, entire text; all drawings, especially paragraphs [0059] and [0060]; comparative example 1; comparative example 2 (Family: none)

Document 3: JP 6-138319 A (Kuraray Co., Ltd.), 20 May 1994, entire text; all drawings & JP 3342516 B2

Document 4: JP 2002-28939 A (Kuraray Co., Ltd.), 29 January 2002, entire text; all drawings, especially [claim 1] & JP 3422759 B2

Document 5: EP 1153961 A2 (Kuraray Co., Ltd.), 14 November 2001, entire text; all drawings, especially claim 1 & JP 2002-28938 A entire text; all drawings & US 2001/0039319 A1 & CN 1321703 A & KR 2001100955 A

Document 6: JP 6-347641 A (Kuraray Co., Ltd.), 22 December 1994, entire text; all drawings, especially paragraph [0035], comparative example 1; comparative example 3 (Family: none)

Document 7: JP 2001-311826 A (Nitto Denko Corporation), 9 November 2001, entire text; all drawings (Family: none)

Document 8: JP 2001-228333 A (Sumitomo Chemical Co., Ltd.), 24 August 2001, entire text; all drawings (Family: none)

Document 9: US 2001/0033349 A1 (Masaru Honda et al.), 25 October 2001, entire text; all drawings & JP 2001-228332 A (entire text; all drawings) & KR 2001062239 A TW 509803 A

Claims 1, 4 to 11, 14 to 17 and 19

Documents 1 and 2 set forth polarizers containing a dichroic substance in a matrix.

Documents 1 and 2 do not directly disclose a measurement wavelength which does not exhibit absorption, wherein in-plane phase difference is set to fall within the range of 950nm to 1350nm.

However, in the light of the materials used in polarizers, and the numerical values for diffraction rate and thickness, documents 1 and 2 are understood to disclose polarizers which are highly likely to correspond to the aforementioned range.

Therefore the inventions set forth in claims 1, 4 to 11, 14 to 17 and 19 lack novelty in the light of documents 1 and 2.

Claims 2 and 3

As the degree of variation in in-plane phase difference of polarizers, claims 2 and 3 make a variety of specifications concerning differential variation, the distance between maximum and minimum values, and the degree of difference between maximum and minimum values.

However, in the field of polarizers, techniques of reducing the variation in in-plane phase difference or

parameters with the same meaning are well known, as described in documents 3 to 5, for example, and when specifying these values, determining the specific assessment method, measurement method, and determining the assessment values and measurement values specified by these assessment methods and measurement methods are merely matters which would be determined as necessary by a person skilled in the art according to the design requirements and performance requirements.

Therefore the invention set forth in claims 2 and 3 does not involve an inventive step in the light of a combination of the known techniques set forth in documents 1, 2, and 3 to 5.

Claims 12 and 13

It is a known technique in common practice to combine polarizers with polarizing changers or phase differentiating films.

Refer to documents 2 and documents 7 to 9 for examples of techniques of combining polarizers with polarizing changers or phase differentiating films.

Claim 18

It is a known technique in common practice to apply a polarizer to an electroluminescence display unit.

Moreover, refer to document 7 as an example of this technique.

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 1 sets forth a polarizer, wherein the in-plane phase difference in the measurement wavelength which does not exhibit absorption falls within the range of 950 to 1350nm.

However, the values of the aforementioned measurement wavelength which does not exhibit absorption are undefined and unclear, hence the range of values for in-plane phase difference thereby described is undefined and unclear. Therefore the polarizer described by the aforementioned in-plane phase difference is unclear.

Claim 2 describes the range of values for differential phase difference variation for in-plane phase difference at measurement wavelengths which do not exhibit absorption.

However, the values of the aforementioned measurement wavelength which does not exhibit absorption are undefined and unclear, hence the range of values for variation in differential phase difference of in-plane phase difference thereby described is undefined and unclear. Therefore the polarizer described by the aforementioned variation in differential phase difference of the aforementioned in-plane phase difference is unclear.

Claim 3 sets forth a measurement wavelength which does not exhibit absorption, wherein the distance between the region which exists maximum value for in-plane phase difference and the minimum value for in-plane phase difference is 10mm or less or 100mm or more, and the difference between the aforementioned maximum and minimum

VIII. Certain observations on the international application

values (the variation of in-plane phase difference) is less than 60nm.

However, the values of the aforementioned measurement wavelength which does not exhibit absorption are undefined and unclear, therefore the range of values for distance between the region which exhibits the maximum value and the region which exhibits the minimum value for in-plane phase difference thereby described is undefined and unclear. Therefore the polarizer described by the aforementioned range of values for distance between the region exhibiting the maximum value and the region exhibiting the minimum value for in-plane phase difference, and the range of values for the difference between maximum and minimum values, is unclear.